

# **MONTANA BOARD OF MEDICAL EXAMINERS**

EMERGENCY MEDICAL TECHNICIANS

MONTANA PREHOSPITAL

TREATMENT PROTOCOLS

April 2008

## Instructions for using the Board Approved Protocols

The Montana Board of Medical Examiners has approved the following protocols for licensed Montana Emergency Medical Technicians from First Responder to Paramedic (including endorsements).

These protocols are intended to be used as a default or baseline protocols for Emergency Medical Services and service medical directors to assist in providing established and approved guidelines for individual providers functioning in prehospital, transport and emergent conditions.

The service medical director may choose not to use the default protocols and may develop protocols for their Emergency Medical Service; however, service specific protocols must be first reviewed and approved by the Board of Medical Examiners.

The Board authorizes the service medical director to use the Board approved protocols in their entirety or may determine to limit individual EMT providers function / practice where appropriate and in accordance with provider's abilities. However, the service medical director may not significantly alter or expand approved Board protocols without first seeking Board of Medical Examiners approval. (See ARM 24.156. 2140 for Board Protocol Request/Approval Procedures). A submission for approval form is available on [www.emt.mt.gov](http://www.emt.mt.gov).

Emergency Medical Technicians may not function/practice beyond their individual licensure level and scope of practice authorized by medical control.

These protocols define the expected performance of various levels of prehospital personnel when faced with a variety of emergency situations. This is not a procedure manual describing the "how to", but a performance manual which guides the "what to do". It is presented in a field guide format for easy reference.

The Advanced Cardiac Life Support (ACLS) algorithms for the various arrhythmias are not reproduced in this protocol manual. They are available from various sources and it would serve no useful purpose to re-print them in this manual. When the appropriate Emergency Medical Technician encounters an arrhythmia, they are to treat the patient: within their scope of practice, according to the most recent ACLS protocols and as directed by their medical director.

## General Instructions

To use these protocols as they are intended, it is necessary to know the underlying assumptions:

1. Users of these protocols are assumed to have knowledge of the more detailed and basic patient management principles found in National Standard Curricula and EMS textbooks and literature appropriate to the EMS provider's level of training and licensure.
2. The protocols are **NOT** intended to be a sequential approach to patient care where everything must be done in the exact order written. Each level of training/certification is expected to appropriately integrate their skills into the total patient care (e.g. in the SHOCK protocol, the EMT-Intermediate is to "establish an advanced airway as needed". While this is listed as the first item under INTERMEDIATE, the EMT-I should know it may well need to be incorporated into the INITIAL ASSESSMENT.)
3. Drug dosages contained within this protocol are to assume "**LEAN BODY WEIGHT**" when computing dosages/body weight.
4. The term "**AS NECESSARY**", when used in the sections dealing with IV administration, means: (1) when the patient presents signs and symptoms of impending shock, (2) has potential to develop shock, (3) or for medication administration.
5. The term "**Start a peripheral IV(s)**" when dealing with pediatric patients means, after one peripheral attempt or if NO obvious site is present, establish an intraosseous site.

Each protocol has identified the licensure level or endorsement for specific treatment considerations. If a specific licensure level or endorsement is not listed, there is nothing specific for that level or endorsement. However, each level of licensure or endorsement assumes that everything prior to that level or endorsement has been considered or completed. As example if pain medications are identified at the EMT-I level, it can be assumed that the EMT-P should include pain medications as well as anything specifically listed under EMT-P.

## GENERAL ORDERS FOR ALL PATIENTS

- I. **Scene Size Up and Initial Assessment.** Done initially on every patient and repeated every 5-10 minutes.
  - A. Check responsiveness.
  - B. AIRWAY - Is it patent? Identify and correct existing or potential obstruction.
  - C. BREATHING - Present? Estimate rate, quality, and bilateral breath sounds. **Consider oxygen administration, establish device/LPM by individual protocol.** Identify and correct existing or potential compromising factors.
  - D. CIRCULATION - Pulse present? Estimate rate, quality, and location of pulse and capillary refill. Control external bleeding, identify and treat for shock.
  - E. LOC, mini neurological survey; AVPU (A-alert, V-verbal, P-pain, U-unresponsive).
  - F. If patient's condition dictates early transport, secondary assessment and additional treatment may be completed en-route to the hospital.
- II. **FOCUSED and DETAILED ASSESSMENT.** Complete as indicated by patient's condition. May include one or more of the following:
  - Determine level of consciousness.
  - Obtain AMPLE (allergies, medications, past medical history, last meal and event) history from the patient, family and/or bystanders.
  - Check for medical identification.
  - Perform a head to toe assessment.
  - Locate patient's medications and bring to hospital.
  - Obtain and record pulse, respirations, blood pressure, skin color and pupil reaction and size.
  - Obtain other pertinent information as determined by patient's condition.
- III. **Additional Field Treatment and Preparation for Transport**
  - See appropriate protocol.
  - Any intravenous fluids or medications may be administered intraosseously
- IV. **Communications**
  - A. Radio information protocol, from First Responders to responding ambulance:
    - Patient's age and sex.
    - Chief complaint or problem.
    - Vital signs and level of consciousness.
    - Physical assessment findings.
    - Pertinent history as needed to clarify problem (medications, illness, allergy, mechanism of injury).
    - Treatment given and patient's response.
  - B. Radio information protocol, from transporting personnel, to medical facility before and during transport:
    - Identify ambulance service.
    - Patient's age and sex.
    - Chief complaint or problem.
    - Vital signs and level of consciousness.
    - Physical assessment findings.
    - Pertinent history as needed to clarify problem (medications, illness, allergy, mechanism of injury).
    - Treatment given and patient's response.
    - Estimated time of arrival (E.T.A.)
      - Identify receiving hospital if different than the one communicating to.
    - Advise receiving facility of changes in patient's condition at any time.
    - Provide a verbal report to, and leave a written report with the receiving facility.

**Do not delay transport or treatment of the patient because of communication problems**

**NOTE: A higher level of care when available should be requested as appropriate. Patient transport should not be delayed awaiting arrival of the higher level of care.**

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## Universal Precautions

Since medical history and examination cannot reliably identify all patients infected with HIV or other blood-borne pathogens, blood and body-fluid precautions should be consistently used for **ALL** patients, especially including those in emergency-care settings in which the risk of blood exposure is increased and the infection status of the patient is usually unknown.

1. All health-care workers should routinely use appropriate barrier precautions to prevent skin, and mucous-membrane exposure when contact with blood or other body fluids of any patient is anticipated. Gloves should be worn for touching blood and body fluids, mucous membranes, or non-intact skin of all patients, for handling items or surfaces soiled with blood or body fluids, and for performing venipuncture and other vascular access procedures. Gloves should be changed after contact with each patient. Masks and protective eye wear or face shields should be worn during procedures that are likely to generate droplets of blood or other body fluids to generate splashes of blood or other body fluids.
2. Hands and other skin surfaces should be washed immediately and thoroughly if contaminated with blood or other body fluids. Hands should be washed immediately after gloves are removed.
3. All health-care workers should take precautions to prevent injuries caused by needles, scalpels, and other sharp instruments or devices during procedures; when cleaning used instruments; during disposal of used needles; and when handling sharp instruments after procedures. To prevent needlestick injuries, needles should not be recapped, purposely bent or broken by hand, removed from disposable syringes or otherwise manipulated by hand. After they are used, disposable syringes and needles, scalpel blades, and other sharp items should be placed in puncture-resistant containers for disposal; the puncture resistant containers should be located as close as practical to the use area. Large-bore reusable needles should be placed in a puncture-resistant container for transport to the reprocessing area.
4. Although saliva has not been implicated in HIV transmission, to minimize the need for emergency mouth-to-mouth resuscitation, mouthpieces, resuscitation bags, or other ventilation devices should be available for use in areas in which the need for resuscitation is predictable.
5. Health-care workers who have exudative lesions or weeping dermatitis should refrain from all direct patient care and from handling patient-care equipment until the conditions resolves.
6. Pregnant health-care workers are not known to be at a greater risk of contracting HIV infection than health-care workers who are not pregnant; however, if a health-care worker develops HIV infection during pregnancy, the infant is at risk of infection resulting from perinatal transmission. Because of this risk, pregnant health-care workers should be especially familiar with and strictly adhere to precautions to minimize the risk of HIV transmission.

Implementation of universal blood and body-fluid precautions for ALL patients eliminates the need for use of the isolation category of "Blood and Body Fluid Precautions" previously recommended by CDC (7) for patients known or suspected to be infected with blood-borne pathogens. Isolation precautions (e.g., enteric, "AFB" [7]) should be used as necessary if associated conditions, such as infectious diarrhea or tuberculosis, are diagnosed or suspected.

## **ABDOMINAL PAIN (Medical Etiology)**

### **EMT-F (First Responder):**

#### **INITIAL ASSESSMENT**

Be alert for and treat shock; see Shock Protocol, page 58

#### **FOCUSED / DETAILED ASSESSMENT**

Note nature of illness

Visualize and palpate abdomen

Obtain history

Obtain and record vital signs

#### **ADDITIONAL FIELD TREATMENT AND PREPARATION FOR TRANSPORT**

Place patient in position of comfort

### **EMT-B (with IV endorsement):**

Start a peripheral IV(s), as necessary, with NORMAL SALINE /LACTATED RINGERS solution (en route)

### **EMT-I (EMT-Intermediate):**

**Adult:** May administer analgesics judiciously if BP > 100 systolic  
MORPHINE 2-5 mg, not to exceed 10mg (IV)

**Pediatric:** MORPHINE 0.1mg/kg , not to exceed 5mg (IV)

### **EMT-P (EMT-Paramedic):**

May administer alternative analgesics of choice if BP systolic > 100

Consider benzodiazepine for muscle spasm or additional pain control

May use anti-emetic if indicated

#### **NOTE:**

Nothing by mouth

Important history

SAMPLE

Bowel function

Last menstrual period?

Possibly pregnant?

Rectal bleeding

Vomiting (nausea)

## ABDOMINAL TRAUMA

### EMT-F (First Responder):

#### INITIAL ASSESSMENT

Be alert for and treat shock; see Shock Protocol, page 58

Control external bleeding; see Bleeding Protocol, page 17

#### FOCUSED / DETAILED ASSESSMENT

Note mechanism of injury.

### EMT-B (with IV endorsement):

Start a peripheral IV(s), as necessary, with NORMAL SALINE /LACTATED RINGERS solution (en route)

### EMT-I (EMT-Intermediate):

**Adult:** May administer analgesics judiciously if BP > 100 systolic

MORPHINE 2-5 mg, not to exceed 10mg (IV)

**Pediatric:** MORPHINE 0.1mg/kg, not to exceed 5mg (IV)

### EMT-P (EMT-Paramedic):

May administer alternative analgesics of choice if BP systolic > 100

Consider benzodiazepine for muscle spasm or additional pain control

May use anti-emetic if indicated

#### NOTE:

If injury is in the upper abdomen, consider the possibility of chest injuries

See Chest Injury Protocol, page 22

Injury to the abdomen may cause vomiting; protect the airway

Immobilize patient as indicated.

Give nothing by mouth.

In blunt trauma, see Multiple Trauma Protocol, page 37

Determine if the patient is pregnant

Keep eviscerated bowel covered with a moist dressing

Immobilize impaled objects in place



# ABNORMAL DELIVERY PROCEDURES

## **BREECH BIRTH**

Breech-Buttocks First Presentation

Administer high flow oxygen per non-rebreather mask

Allow delivery to progress spontaneously

Support infant's body as it is delivered

If head delivers, proceed as in Obstetrical Emergencies Protocol, page 40

If head does not deliver within 2 minutes, insert gloved hand into vagina to take the pressure off the cord and if possible create a space around the infant's nose to allow breathing.

***TRANSPORT IMMEDIATELY, DO NOT REMOVE HAND UNTIL RELIEVED BY RECEIVING FACILITY STAFF***

Notify receiving facility as soon as possible

## **LIMB PRESENTATION**

Place mother in Trendelenburg position

Administer high flow oxygen per non-rebreather mask

***TRANSPORT IMMEDIATELY***

## **PROLAPSED CORD**

Place mother in Trendelenburg position or knee-chest position

Administer high flow oxygen per non-rebreather mask

Insert gloved hand into vagina and push baby's head off of the cord

***TRANSPORT IMMEDIATELY, DO NOT REMOVE HAND UNTIL RELIEVED BY RECEIVING FACILITY STAFF***

Notify receiving facility as soon as possible

## **MULTIPLE BIRTHS**

While unusual, be alert to the possibility and stay with the patient.

### **NOTES**

Consider the possibility of pregnancy in any female of child bearing age with complaints of vaginal bleeding, menstrual cycle irregularity, abdominal pain or low back pain not associated with trauma, or shoulder pain not associated with trauma.

If cord is around baby's neck during delivery, slip cord over baby's head to avoid strangulation of baby. If unable, clamp cord twice and cut between clamps.

The greatest risks to the newborn infant are airway obstruction and hypothermia. KEEP BABY WARM, COVERED AND DRY, INCLUDING THE HEAD; KEEP AIRWAY SUCTIONED with a bulb syringe (squeeze bulb before inserting into the mouth and do not touch the posterior pharynx)

Greatest risk to the mother is postpartum hemorrhage; watch closely for signs of hypovolemic shock with excessive vaginal bleeding

Anytime the mother in labor displays sudden onset of severe abdominal pain and/or shock, place mother on left or right side and treat for shock

Spontaneous or induced abortions may result in copious vaginal bleeding. Provide emotional support. Treat for shock as indicated. Bring fetus and any tissue to the receiving facility.

Follow NALS or PALS current guidelines for additional care as appropriate

## ALTERED MENTAL STATUS

### EMT-F (First Responder):

#### INITIAL ASSESSMENT

- Establish and protect airway
- Suction secretions as needed
- Administer high flow oxygen by non-rebreather mask
- Use pocket mask to assist ventilations as needed
- Mini neurological survey
- Assess and treat for shock; see Shock Protocol, page 53

#### FOCUSED / DETAILED ASSESSMENT

- Identify mechanism of injury and/or etiology and treat as indicated; see specific protocols
- Obtain a history
- Neurological assessment on all four extremities

#### ADDITIONAL FIELD TREATMENT AND PREPARATION FOR TRANSPORT

- It may be necessary to place patient in the coma position

### EMT-F (with monitoring endorsement):

- Determine glucose and report findings to arriving transporting service

### EMT-B (EMT-Basic):

- Transport patient in coma position as injuries allow
- Contact local medical control
- Use bag valve mask to assist ventilations as needed, 100% oxygen

### EMT-B (with airway endorsement):

- Utilize a dual lumen tube or laryngeal mask airway as needed

### EMT-B (with IV/IO endorsement):

- Start a peripheral IV(s) as necessary, with NORMAL SALINE /LACTATED RINGERS solution (en route)

### EMT-B (with ET endorsement):

- Establish advanced airway as needed

### EMT-B (with medication endorsement):

- If glucose < 60, administer GLUCAGON

### EMT- I (EMT-Intermediate):

#### Administer:

**Adult-**IF glucose is < 60 or unable to determine glucose, administer THIAMINE 100 mg IV then DEXTROSE 50% (50cc), IF unable to initiate a peripheral IV and if glucose < 60, administer GLUCAGON 1mg IM

NARCAN 2-4 mg IV, ET, IM (be aware that the patient may become belligerent or hostile and may need restraint)

**Pediatric** - NARCAN 0.1 mg/kg IV, ET, IM, IO

IF glucose is < 60 or unable to determine glucose then administer DEXTROSE 25%, 2cc/kg IV over 2 minutes

**DO NOT** give DEXTROSE If coma is secondary to trauma unless glucose is < 60, then give small amounts of DEXTROSE 50% (5-10ml) and recheck glucose between doses until in the normal range

If stroke is suspected; Avoid affected limbs when establishing IV(s) if, possible

**NOTE:**

Maintain a high index of suspicion for neck injury in the unconscious patient with unknown etiology;

See Head/Neck/Spine Protocol, page 34

Keep suction available at all times.

Prepare to handle respiratory and/or cardiac arrest.

Prepare to handle combative, disoriented patient.

Prepare to handle seizures; see Seizure Protocol, page 47

Remember, **TALK** to the patient Hearing is the last sense to be lost in coma.

Transport all medications with patient.

Consider possible stroke

If diabetic emergency is a consideration and patient is unconscious,

DO NOT administer oral glucose.

While aphasic patients are unable to speak, they are usually acutely aware of their surroundings and very frightened, **TALK** to the patient, and keep the patient **INFORMED**

Extremes of BP, either high (over 200 mm Hg systolic) or low (under 100 mm Hg systolic) or with other clinical signs of shock indicate need to expedite transport.

Notify receiving facility of the patient's condition.

## AMPUTATED PART

### EMT-F (First Responder):

#### INITIAL ASSESSMENT

Control external bleeding; see External Bleeding Protocol, page 17  
Be alert for and treat shock; see Shock Protocol, page 53

#### FOCUSED / DETAILED ASSESSMENT

Identify mechanism of injury

#### ADDITIONAL FIELD TREATMENT AND PREPARATION FOR TRANSPORT

Apply appropriate dressing  
Care of amputated part: Rinse the part gently with normal saline to remove loose debris  
**DO NOT SCRUB**  
Wrap amputated part in gauze moistened with saline  
Place wrapped part into plastic bag and seal with tape (do not pour more fluid into bag)  
Label with name, date and time  
Place plastic bag into container filled with ice and water if available (do not use "dry ice",  
**DO NOT SUBMERGE**)  
**DO NOT ALLOW PART TO FREEZE!**  
Label with name, date and time  
Arrange for transport of amputated part with patient

### EMT-F (with ambulance endorsement):

While prompt transport and definitive care are important, care must be taken to assure total patient assessment and safety for all concerned during transport  
Be sure amputated parts accompany ALL patients, including field deaths

### EMT-B (with IV endorsement)

Start IV as necessary, with NORMAL SALINE /LACTATED RINGERS solution (en route)

### EMT-I (EMT-Intermediate):

Administer analgesic for pain:

**Adult** - MORPHINE 2-5 mg IV,IO, IM, Repeat every 5 minutes as needed up to a maximum of 15 mg (as long as vital signs are stable)

**Pediatric** - MORPHINE 0.1 mg/kg to a max of 5mg (IV, IO IM)

Hold analgesic options if blood pressure is less than 100 systolic or if respiratory depression is present

### EMT-P (EMT-Paramedic):

May administer alternative analgesics of choice if BP systolic > 100.  
Consider benzodiazepine or muscle spasm or additional pain control

#### NOTE:

Be sure the obvious injury is the only injury

# ANAPHYLAXIS

## EMT-F (EMT-First Responder):

### INITIAL ASSESSMENT

Be alert for and treat shock; see Shock Protocol, page 53

Be alert for dyspnea, see Dyspnea Protocol, page 31

### FOCUSED / DETAILED ASSESSMENT

Obtain pertinent medical history without delay of treatment

Known sensitivities and allergies

Onset of symptoms

Possible source of toxin

Check for Medical Alert tags

Prescribed medications in patient's possession

Medications patient has taken, how much, when and responses

### ADDITIONAL FIELD TREATMENT AND PREPARATION FOR TRANSPORT

Activate EMS system at highest level of care for rapid transport

## EMT-B (EMT-Basic):

Administer patient prescribed EPINEPHRINE AUTO-INJECTOR

Administer patient prescribed ALBUTEROL INHALER

## EMT B (with IV endorsement):

Start IV with NORMAL SALINE/LACTATED RINGERS solution (en route)

## EMT-B (with medication endorsement):

**IF** the patient develops a rash, itching or local swelling then administer (en route):

**Adult** - BENADRYL 50-100 mg (PO, IM)

**Pediatric** - BENADRYL 0.5-1 mg/kg to a max of 100mg (PO, IM)

If BP < 60 systolic or in respiratory distress, administer Epinephrine injection

**Adults** – Epinephrine auto injector or pre-filled syringe (1:1000) 0.3 mg (0.3 cc of 1:1000) SQ or IM

**Pediatric** – Epinephrine auto injector junior or pre-filled syringe (1:1000) 0.01 mg/kg to a max of 0.3 mg SQ or IM

For respiratory distress: ALBUTEROL MDI or UNIT dose (2.5 mg) administered by nebulizer

## EMT-I (EMT-Intermediate):

**IF** the patient develops a rash, itching or local swelling then administer (en route):

**Adult** - BENADRYL 50-100mg (PO, IV, IM)

**Pediatric** - BENADRYL 0.5-1 mg/kg to a max of 100mg (PO, IV, IM, IO)

IF BP is < 60 systolic or in respiratory distress, administer:

**Adult** - EPINEPHRINE 0.01 cc/kg of 1:10000 (IV) or 0.3 mg (0.3cc of 1:1000) (SC, IM)

**Pediatric** - EPINEPHRINE 0.01 mg/kg to a max of 0.3 mg

(0.01 cc/kg of 1:1000 SC)

For respiratory distress: ALBUTEROL 2.5mg mixed in 3cc of normal saline, NEBULIZED with oxygen

**NOTE**

Use Caution when administering epinephrine in older patients or history of cardiovascular disease.

DO NOT delay transport for treatment.

The rescuer MAY assist the patient in, administration of the patient's own prescribed medications.

If an insect sting, scrape stinger out, do not, pull stinger out.

Presence of edema of tongue, mouth, and/or throat is an indicator for immediate transport.

Anticipate acute airway obstruction and or respiratory arrest.

## **ARREST-CARDIAC (ADULT)**

### **EMT-F (First Responder):**

#### **INITIAL ASSESSMENT**

Initiate CPR according to AHA standards

For hypothermic patients, see Cold Emergencies - Systemic Hypothermia Protocol, page 26

Suction secretions as needed

Administer high flow oxygen via pocket mask to assist ventilation

Use bag valve mask to assist ventilation, as needed, 100% oxygen

#### **FOCUSED / DETAILED ASSESSMENT**

Obtain a history if possible

#### **ADDITIONAL FIELD TREATMENT AND PREPARATION FOR TRANSPORT**

Protect limbs from injury during movement

### **EMT-B (EMT-Basic):**

Initial Medical Care

Attach AED and follow protocol

Use bag valve mask to assist ventilations

### **EMT-B (with airway or ET endorsement):**

Establish advanced airway as needed

### **EMT-B (with IV endorsement):**

Start a peripheral IV with NORMAL SALINE /LACTATED RINGERS solution

### **EMT-I (EMT-Intermediate):**

Attach monitor.

Identify rhythm and treat specific dysrhythmia; within scope of practice, according to the most recent ACLS protocols and as directed by the medical director

### **EMT-P (with 12 lead interpretation endorsement):**

Transmit 12 EKG

### **EMT-P (with thrombolytics and 12 lead interpretation endorsement):**

Transmit and or interpret EKG

Contact Medical Control

Administer thrombolytics per protocol

## ARREST-CARDIAC (PEDIATRIC)

### EMT-F (First Responder):

#### INITIAL ASSESSMENT

- Perform CPR according to AHA standards, as necessary
- Suction secretions as needed.
- Administer high flow oxygen via pocket mask
- Assist ventilation with pediatric bag valve mask, 100% oxygen

#### FOCUSED / DETAILED ASSESSMENT

- Obtain a history

#### ADDITIONAL FIELD TREATMENT AND PREPARATION FOR TRANSPORT

- Protect limbs from injury during movement

### EMT-B (EMT-Basic):

- Assist ventilation with pediatric bag valve mask, 100% oxygen

### EMT-B (with IV endorsement)

- Start IV with NORMAL SALINE or LACTATED RINGERS solution (en route).
- Pediatric- Administer an initial fluid bolus of 20cc/kg. Repeat one time and then contact medical control

### EMT-B (with Airway or ET endorsement):

- If age > 12, establish advanced airway as needed

### EMT-I (EMT-Intermediate):

- Attach monitor
- Attach monitor
- Identify rhythm and treat specific dysrhythmia; within scope of practice, according to the most recent PALS protocols and as directed by the medical director

#### NOTE:

Consider foreign body obstruction.  
Airway and oxygen is the most important during a pediatric arrest, since most arrests are respiratory.  
Defibrillation is rarely indicated and a secondary consideration to airway.



## **BLEEDING CONTROL (EXTERNAL)**

### **EMT-F (FIRST RESPONDER):**

#### **INITIAL ASSESSMENT**

Control bleeding

Apply direct pressure over wound with your GLOVED hand (use dressing if immediately available)

After bleeding is controlled, apply a pressure dressing

Be alert for and treat shock; see Shock Protocol, page 53

#### **FOCUSED / DETAILED ASSESSMENT**

Identify mechanism of injury

#### **ADDITIONAL FIELD TREATMENT AND PREPARATION FOR TRANSPORT**

Monitor dressing and vital signs continuously

### **EMT-F (with ambulance endorsement):**

Pressure dressing may include use of air splints or BP cuff partially inflated over the dressed wound

### **EMT-B (with airway or ET endorsement):**

Establish advanced airway as needed

### **EMT-B (with IV endorsement)**

Start IV with NORMAL SALINE/LACTATED RINGERS solution (en route)

#### **NOTE:**

Consider removal of impaled objects in the cheek only if necessary to assure patient airway. Elevation of the injured part or arterial pressure points may be useful to assist in bleeding control.

Be cautious for possible damage to gloves when applying direct pressure (bone ends, glass, etc.)

A tourniquet may cause loss of limb and should be a last resort.

## BURNS-CHEMICAL

**EMT-F** (First Responder):

### ***ENSURE YOUR OWN SAFETY !***

#### INITIAL ASSESSMENT

Be alert for and treat airway compromise

Be alert for and treat respiratory compromise; see Dyspnea Protocol, page 31

Be alert for and treat shock; see Shock Protocol, page 53

Remove contaminant

Chemical on skin:

Remove contaminated clothing and flood skin with water for 20 minutes;  
wash gently with soap, water, and rinse

If contaminant is dry powder, brush off before washing

Identify contaminant. See Poisoning Protocol, page 44

Chemical in eye:

Flood eye(s) with lukewarm water continuously for at least 20 minutes and  
have patient blink frequently during irrigation

Identify contaminant

See Poisoning Protocol, page 44

#### FOCUSED / DETAILED ASSESSMENT

Obtain and record pertinent history of events including:

Contaminant

Initial contact and length of exposure

#### ADDITIONAL FIELD TREATMENT AND PREPARATION FOR TRANSPORT

Notify medical control of hazardous material situation.

**EMT- B** (with airway or ET endorsement):

Establish advanced airway as needed

**EMT-B** (with IV endorsement):

Start IV with NORMAL SALINE/LACTATED RINGERS solution (en route).

Utilize a non-burned area if possible.

**Adult** - administer a 500cc - 1000cc bolus of fluid and contact medical control for rate adjustment

**Pediatric** - administer a 20cc/kg fluid bolus and contact medical control for rate adjustment

**EMT-I** (EMT-Intermediate):

Attach monitor.

Administer analgesic for pain:

**Adult** - MORPHINE 2-5 mg IV or IM, Repeat every 5 minutes as needed up to a maximum of 15 mg (as long as vital signs are stable)

**Pediatric** - MORPHINE 0.1 mg/kg to a max of 5mg (IV or IM)

Hold analgesic options if blood pressure is less than 100 systolic or if respiratory depression is

present

**EMT-P** (EMT-Paramedic):

May administer alternative analgesics of choice if BP systolic > 100.

Consider benzodiazepine for muscle spasm or additional pain control.

**NOTE:**

Stop burning process.

Be alert for progressing airway problems in patients who have burns involving face, head, neck, or chest.

Be alert for smoke inhalation; see Poisoning Protocol, Page 44; or respiratory tract burns; see Dyspnea Protocol, Page 31

Remove jewelry and non-adherent clothing from burned areas.

Keep patient warm.

## BURNS-ELECTRICAL

### EMT-F (First Responder):

#### ***ENSURE YOUR OWN SAFETY !***

#### INITIAL ASSESSMENT

Be alert for and treat cardiac arrest; see Arrest Protocol, page 15

Be alert for and treat shock; see Shock Protocol, page 53

#### FOCUSED / DETAILED ASSESSMENT

Identify mechanism of injury

Identify all electrical contact points

Time of electrical contact

### EMT-B (with airway or ET endorsement):

Establish advanced airway as needed

### EMT-B (with IV endorsement):

Start IV with NORMAL SALINE/LACTATED RINGERS solution (en route).

Utilize a non-burned area if possible.

**Adult** - administer a 500cc - 1000cc bolus of fluid and contact medical control for rate adjustment

**Pediatric** - administer a 20cc/kg fluid bolus and contact medical control for rate adjustment

### EMT-I (EMT-Intermediate):

Administer analgesic for pain:

**Adult** - MORPHINE 2-5 mg IV or IM, Repeat every 5 minutes as needed up to a maximum of 15 mg (as long as vital signs are stable)

**Pediatric** – MORPHINE 0.1 mg/kg to a max of 5mg (IV or IM)

Hold analgesic options if blood pressure is less than 100 systolic or if respiratory depression is present

### EMT-P (EMT-Paramedic):

May administer alternative analgesics of choice if BP systolic > 100

Consider benzodiazepine for muscle spasm or additional pain control

#### **NOTE:**

Stop burning process.

**Be alert to smoke inhalation;** see Poisoning Protocol, Page 44

Be alert to progressing airway problems in patients who have burns involving face, head, neck, and chest.

Remove jewelry and non-adherent clothing from burned areas.

Keep patient warm.

## BURNS-THERMAL

### EMT-F (First responder):

#### ***ENSURE YOUR OWN SAFETY !***

#### INITIAL ASSESSMENT

Be alert for and treat airway compromise.

Be alert for and treat respiratory distress; see Dyspnea Protocol, page 31

Be alert for and treat shock; see Shock Protocol, page 53

#### FOCUSED / DETAILED ASSESSMENT

Obtain and record vital signs every 5-15 minutes depending on severity of burn

Obtain time of burn

Determine mechanism of injury and be alert for other trauma

#### ADDITIONAL FIELD TREATMENT AND PREPARATION FOR TRANSPORT

For large surface burns (i.e., torso, legs, etc.) place patient between clean dry sheets

Dress smaller burns with sterile dry dressing

### EMT-B (with airway or ET endorsement):

Utilize a dual lumen tube or laryngeal mask airway as needed

### EMT-B (with IV endorsement)

Start a peripheral IV(s) as necessary, with NORMAL SALINE/LACTATED RINGERS solution (en route). Utilize a non-burned area if possible

**Adult** - administer a 500cc - 1000cc bolus of fluid and contact medical control for rate adjustment

**Pediatric** - administer a 20cc/kg fluid bolus and contact medical control for rate adjustment

### EMT-I (EMT-Intermediate):

Administer analgesic for pain:

**Adult** - MORPHINE 2-5 mg IV or IM, Repeat every 5 minutes as needed up to a maximum of 15 mg (as long as vital signs are stable)

**Pediatric** – MORPHINE 0.1 mg/kg to a max of 5mg (IV or IM)

Hold analgesic options if blood pressure is less than 100 systolic or if respiratory depression is present

### EMT-P (EMT-Paramedic):

May administer alternative analgesics of choice if BP systolic > 100

Consider benzodiazepine or muscle spasm or additional pain control

#### **NOTE:**

Stop burning process. **Be alert to smoke inhalation**; see Poisoning Protocol, Page 44  
Be alert to progressing airway problems in patients who have burns involving face, head, neck, and chest.

Remove jewelry and non-adherent clothing from burned areas. Keep patient warm.

## **CHEST INJURIES**

### **EMT-F (First Responder):**

#### **INITIAL ASSESSMENT**

- Administer high flow oxygen per non-rebreather mask
- Use pocket mask to assist respirations as needed
- Dress open chest wound with occlusive dressing secured to the chest wall on three sides, forming a flutter valve
- Be alert for and treat shock; see Shock Protocol, page 53

#### **FOCUSED / DETAILED ASSESSMENT**

- Identify mechanism of injury
- Examine patient's posterior chest

#### **ADDITIONAL FIELD TREATMENT AND PREPARATION FOR TRANSPORT**

- Check for tension pneumothorax: tracheal deviation (a late sign) and/or subcutaneous emphysema
- Other injuries permitting, patient should be allowed to seek position of comfort
- Continually assess and document respiratory status
- In open chest wounds, watch the patient closely for signs of developing tension pneumothorax
- Impaled object should be stabilized in place

### **EMT-B (EMT-Basic)**

- Assess bilateral breath sounds
- Use bag valve mask to assist ventilation, as needed, 100% oxygen

### **EMT-B (with airway or ET endorsement):**

- Utilize a dual lumen tube or laryngeal mask airway as needed

### **EMT-B (with IV endorsement):**

- Start IV with NORMAL SALINE/LACTATED RINGERS solution (en route)

### **EMT-I (with needle decompression / surgical airway):**

- Decompress chest if tension pneumothorax is suspected

#### **NOTE:**

Chest Injuries are an indication for early transport; notify the transporting agency as soon as possible. Upper abdomen injuries may be in the chest and injuries in the lower chest may involve the abdomen.

## CHEST PAIN

### EMT-FIRST RESPONDER:

#### INITIAL ASSESSMENT

Administer high-flow oxygen with a non-rebreather mask  
Be alert for and treat shock; see Shock Protocol, page 53  
Be alert for irregular pulse rhythm

#### FOCUSED / DETAILED ASSESSMENT

Obtain and record vital signs every 5 minutes  
Obtain pertinent and AMPLE medical history including; onset, location, quality and duration of pain

#### ADDITIONAL FIELD TREATMENT AND PREPARATION FOR TRANSPORT

Place patient in position of comfort, loosen tight clothing and reassure  
Expedite transport. Notify transporting agency as soon as possible

### EMT-B (EMT-Basic):

If systolic blood pressure is > 100, then administer patient prescribed NITROGLYCERINE 0.4 mg (spray, SL)  
May repeat two times at 5 minute intervals if systolic BP remains > 100 mm Hg

### EMT-B (with IV endorsement):

Start IV TKO, with NORMAL SALINE/LACTATED RINGERS solution, (en route)

### EMT-B (with medication endorsement):

If systolic blood pressure is > 100, then administer NITROGLYCERINE 0.4 mg (spray, SL)  
May repeat two times at 5 minute intervals if systolic BP remains > 100 mm Hg  
Administer Aspirin 162-325 mg, chew and swallow, if patient not allergic

### EMT-I (EMT-Intermediate):

Start IV TKO with NORMAL SALINE/LACTATED RINGERS solution  
Attach monitor  
Administer analgesic for pain:

**Adult** - MORPHINE 2-5 mg IV, Repeat every 5 minutes as needed up to a maximum of 15 mg (as long as vital signs are stable)

**Pediatric** - MORPHINE 0.1 mg/kg to a max of 5mg (IV)

Hold analgesic options if blood pressure is less than 100 systolic or if respiratory depression is present

### EMT-I (with 12 lead transmit endorsement):

Obtain and transmit 12 lead (en route)

### EMT-P (with 12 lead interpretation endorsement):

Obtain and interpret 12 lead

**EMT-P (with fibrinolytic endorsement):**

May administer fibrinolytic according to AHA ACLS guidelines for pre-hospital administration

**NOTE:**

Prepare to deal with respiratory or cardiac arrest.

Notify hospital.

Do not allow the patient to ambulate.

The rescuer may assist the patient with self administration of the patients own prescribed nitroglycerine (1 tablet), repeated at 3 to 5 minute intervals, to a maximum of 3 tablets; If discomfort is not relieved and the systolic BP is > 100 mm Hg.

~~Follow the AHA ACLS chest pain algorithm within your level of training.~~



## COLD EMERGENCIES – FROSTBITE

### EMT-F (First Responder):

#### INITIAL ASSESSMENT

Be alert for and treat shock; see Shock Protocol, page 53

#### FOCUSED / DETAILED ASSESSMENT

Assess all frost bitten patients for systemic hypothermia

#### ADDITIONAL FIELD TREATMENT AND PREPARATION FOR TRANSPORT

Protect injured areas from pressure, trauma and friction

Remove only wet coverings (ie: clothing, blankets etc) from injured parts

Do not rub

Do not break blisters

Do not allow the limb to thaw if there is any chance the limb may refreeze before evacuation is complete

### EMT-B (with IV endorsement):

Start a peripheral IV (s) as necessary, TKO with Normal Saline/Lactated Ringers solution

### EMT-I (EMT-intermediate):

Attach monitor

Administer analgesic for pain:

**Adult-** Morphine 2-5 mg IV, repeat every 5 minutes as needed up to a maximum of 15mg. Hold analgesic options if blood pressure is less than 100 systolic, or if respiratory depression is present

**Pediatric** – Morphine 0.1 mg/kg to a max of 5mg or analgesic of choice per protocol

Hold analgesic options if blood pressure is less than 100 systolic, or if respiratory depression is present

#### NOTE:

When practical, major re-warming should be left for a hospital setting.

Warmed (< 104 degrees F) oxygen is preferred, when available.

If a limb has started to thaw, do not allow the patient to ambulate if possible.

## COLD EMERGENCIES - SYSTEMIC HYPOTHERMIA

### EMT-F (First Responder):

#### INITIAL ASSESSMENT

Administer warmed high flow oxygen per non-rebreather mask  
If altered level of conscious, see Altered Mental Status Protocol, page 10

#### FOCUSED / DETAILED ASSESSMENT

Identify mechanism of injury and be alert for other trauma  
Remove only wet clothing and maintain the patient in a warm, draft free environment

#### ADDITIONAL FIELD TREATMENT AND PREPARATION FOR TRANSPORT

**HANDLE ALL HYPOTHERMIA PATIENTS WITH CARE;** rough handling may precipitate ventricular fibrillation

**IF** unconscious and hypothermic

maintain body temperature until a higher level of care is available

**IF** conscious

Add heat packs to the abdomen (not groin or axilla), lateral chest and neck to prevent additional heat loss

Maintain core temperature by keeping the victim warm with blankets

Warm fluids may be administered to a conscious alert patient

### EMT-B (EMT-Basic):

Attach AED:

If patient temperature is > 86 F (30 C), follow AED protocol

If patient temperature is < 86 F (30 C) or unknown, follow AED protocol for the first three shocks, then provide no further shocks till temperature > 86 F

### EMT-B (with IV endorsement):

Start a peripheral IV(s), as necessary, TKO with NORMAL SALINE solution (en route)

Warm (about 100 degrees) IV fluids should be used if possible

Determine glucose

### EMT-B (with ET endorsement):

If core temp >86 then Establish advanced airway as needed

If core temp <86 with signs of cardiac activity – assist ventilations with basic maneuvers

If core temp <86 without signs of cardiac activity – establish advanced airway as needed

### EMT-I (EMT-Intermediate):

Attach monitor.

IF glucose is < 60:

**Adult** - Administer THIAMINE 100 mg (IV) then DEXTROSE 50% (50cc) (IV)

**Pediatric** - DEXTROSE 25%, 1cc/kg to a max of 25cc (IV)

Anti-dysrhythmia medications require core temperatures of 86 F or higher to be effective.

NOTE:

When practical, major re-warming should be left for a hospital setting.

Warmed (<104 degrees F) oxygen is preferred, when available.

CPR should not be Initiated in the field if: core temperature is less than 86 degrees F OR chest is frozen/non-compliant OR the victim has been unquestionably submersed more than 1 hour and core temp > 30°C OR obvious lethal injury is present.

Chest compression **should never** be done if clinical signs of functional cardiac activity are present even if a pulse is not palpable under field conditions.

This includes victims who show any movement, spontaneous respiration, response to positive pressure ventilation, or other signs of life.

## DIABETIC EMERGENCY - CONSCIOUS PATIENT

### EMT-F (First Responder):

#### INITIAL ASSESSMENT

#### FOCUSED / DETAILED ASSESSMENT

Obtain pertinent and AMPLE medical history including: Insulin, or oral diabetic medications;  
type, dosage, time  
How much and when has patient eaten/drank today  
Recent or current illness, heavy exercise or high stress  
Consider pregnancy

#### ADDITIONAL FIELD TREATMENT AND PREPARATION FOR TRANSPORT

Maintain body heat.  
Administer an oral substance high in simple sugar (if tolerated by patient)

### EMT-F (with monitoring endorsement):

Determine glucose and report to arriving transporting service

### EMT-F (with ambulance endorsement):

Transport in position of comfort  
Do not delay transport for the administration of oral glucose agents

### EMT-B (with IV endorsement)

Start a peripheral IV(s), if necessary, TKO with a DEXTROSE solution D5W or D10W, en route

### EMT-B (with medication endorsement):

If glucose < 60, administer GLUCAGON, 1 mg (IM or IN)

### EMT-I (EMT-Intermediate):

Start a peripheral IV(s) as necessary, TKO with NORMAL SALINE

IF glucose is < 60 or unable to determine glucose then:

**Adult** - administer THIAMINE 100 mg IV then DEXTROSE 50% (50cc) IV

IF unable to initiate a peripheral IV and if glucose < 60, administer GLUCAGON 1mg (IM or IN)

**Pediatric**- administer GLUCAGON if < 20 Kg 0.5mg (IM or IN) if > 20 Kg 1mg (IM or IN)  
and or DEXTROSE 25%, 2cc/kg (IV or IO) over 2 minutes

**Neonate** (< 2 months) – administer 2cc/kg, D10W (IV)

Attach monitor

NOTE:  
Insulin should not be given

## DRUG OVERDOSE

### EMT-F (First Responder):

#### INITIAL ASSESSMENT

- Be alert for and treat respiratory compromise; see Dyspnea Protocol, page 31
- Be alert for seizures; see Seizures Protocol, page 47
- Be alert for and treat shock; see Shock Protocol, page 53
- If altered level of consciousness; see Altered Mental Status Protocol, page 10

#### FOCUSED / DETAILED ASSESSMENT

- Identify substance, and have container taken to the hospital
- Estimate quantity
- Time since exposure
- Pertinent medical history including: chronic illness, medical problems within past 24 hours, medications and allergies

#### ADDITIONAL FIELD TREATMENT AND PREPARATION FOR TRANSPORT

- Notify medical control as soon as possible

### EMT-B (EMT-Basic):

- Follow Altered Mental Status protocol, see page 10

### EMT-B (with airway or ET endorsement):

- Establish advanced airway as needed

### EMT-B (with IV endorsement):

- Establish IV access, with Normal Saline/Lactated Ringers Solution (enroute)

### EMT-I (EMT-Intermediate):

- Establish advanced airway as needed.
- Attach monitor
- Start a peripheral IV(s), as necessary, with Normal Saline/Lactated Ringers solution (enroute)

**IF Tricyclic antidepressant overdose** with ventricular arrhythmias, decreased blood pressure or seizures administer:

- Sodium Bicarbonate 1 meq/Kg IV, repeat once, if ventilating the patient, increase rate

#### **IF Oral hypoglycemic or Insulin overdose:**

- Adult** – If glucose < 60 mg/%, administer thiamine 100mg IV, then Dextrose 50% (50cc)
- If unable to initiate a peripheral IV and if glucose < 60mg%, administer Glucagon 1mg (IM or IN)
- Pediatric**- administer GLUCAGON if < 20 Kg 0.5mg (IM or IN) if > 20 Kg 1mg (IM or IN) and or DEXTROSE 25%, 2cc/kg (IV or IO) over 2 minutes
- Neonate** (< 2 months) – administer 2cc/kg, D10W (IV)

**IF Narcotic Overdose** administer:

- Adult** – Narcan 2-4 mg (IV, IO, ET, IM, IN); repeat as necessary

*(Be aware that the patient may become belligerent or hostile and may need restraining)*

**Pediatric:** Narcan 0.1mg/kg (IV, IO, ET, IM, IN); repeat as necessary

**EMT-P** (EMT-Paramedic):

**IF Cyanide poisoning and/or hydrogen sulfide (sewer gas)**

Utilize CYANIDE antidote kit as available on site or administer AMYL NITRATE crushable glass ampules, crush and sniff for 30 seconds of each minute and replace vial every 3 minutes

## DYSPNEA – ADULT

### EMT-F (First Responder):

#### INITIAL ASSESSMENT

- Administer high flow oxygen with a non-rebreather mask
- Use pocket mask to assist respirations as needed
- Assist respirations as needed
- Consider foreign body obstruction

#### FOCUSED / DETAILED ASSESSMENT

- Obtain pertinent medical history

#### ADDITIONAL FIELD TREATMENT AND PREPARATION FOR TRANSPORT

- Allow patient to seek position of comfort

### EMT-B (EMT-Basic):

- Assess bilateral breath sounds
- With distress, and marked wheezing or very decreased breath sounds bilaterally administer patient prescribed metered-dose inhaler
- Two puffs of an ALBUTEROL or IPRATROPIUM metered-dose inhaler with a spacer, may repeat twice
- Use bag valve mask to assist ventilation, as needed, 100% oxygen

### EMT-B (with airway or ET endorsement):

- Establish advanced airway as needed

### EMT-B (With IV Endorsement):

- Start IV TKO with NORMAL SALINE/LACTATED RINGERS solution (en route).

### EMT-B (with medication endorsement):

- With respiratory distress, and wheezing or very decreased breath sounds bilaterally administer: 2 puffs Albuterol via metered dose inhaler with a spacer or Albuterol premix (2.5 mg mixed in 3cc of Normal Saline) via nebulizer with oxygen

### EMT-I (EMT-Intermediate):

- Attach monitor
- With distress, and marked wheezing or very decreased breath sounds bilaterally administer:
  - Adult** – ALBUTEROL 2.5mg mixed in 3cc of normal saline, NEBULIZED with oxygen
  - or** IPRATROPIUM 0.5mg mixed in 3cc of normal saline, NEBULIZED with oxygen
  - or BOTH**
- If pulmonary edema suspected and blood pressure is greater than 180/90, administer three consecutive sprays of nitroglycerine, consider Morphine and Furosemide

### EMT-I (with needle decompression / surgical airway endorsement):

- With complete obstruction of the airway and inability to intubate, consider cricothyrotomy

### EMT-P (EMT-Paramedic):

If pulmonary edema suspected and blood pressure is greater than 180/90, administer three consecutive sprays of nitroglycerine  
Consider administration of ACE inhibitor  
If acute exacerbation of asthma or COPD consider steroids

**NOTE:**

The conscious, dyspneic patient may rapidly deteriorate to respiratory crisis.

**PREPARE TO INTERVENE**

Allergic reactions are frequently responsible for dyspneic episodes, thus inquiry for known allergies must include substances other than medications.

DO NOT withhold oxygen if it is needed.

DYSPNEA is a symptom, not a disease/injury.

Reassess for cause and correct as necessary / possible.

If patient has personal prescribed inhaler, allow the patient to use it, as prescribed, assist as necessary.



# FRACTURES OF EXTREMITIES

## EMT-F (First Responder):

### INITIAL ASSESSMENT

Be alert for and treat shock; see Shock Protocol, page 53

### FOCUSED / DETAILED ASSESSMENT

Identify mechanism of injury

Check pulses and sensation distal to the injury BEFORE and AFTER splinting (CMS)

### ADDITIONAL FIELD TREATMENT AND PREPARATION FOR TRANSPORT

Protect injury from excessive movement

Careful assessment prior to and following manipulation is critical

Elevate injured limb if possible

Apply cold packs to injury site when practical

Apply manual traction when signs and symptoms suggest possible mid-shaft femur fracture

## EMT-F (with immobilization endorsement):

Fractures are splinted in the position found; however, realignment of a fracture may be necessary to facilitate packaging a patient, correct a circulatory compromise, neurological deficit or to allow transportation

Apply a traction splint when signs and symptoms suggest possible mid-shaft femur fracture

## EMT-B (With IV endorsement):

Start a peripheral IV(s), as necessary, with NORMAL SALINE/LACTATED RINGERS solution (en route)

## EMT-I (EMT-Intermediate):

Administer analgesic for pain:

**Adult** -MORPHINE 2-5 mg IV or IM, Repeat every 5 minutes as needed up to a maximum of 15 mg (as long as vital signs are stable)

**Pediatric** -MORPHINE 0.1 mg/kg to a max of 5mg (IV or IM)

Hold analgesic options if blood pressure is less than 100 systolic or if respiratory depression is present

If patient is stable, administer analgesics before moving the fractured extremity

## EMT-P (EMT-Paramedic):

May administer alternative analgesics of choice if BP systolic > 100.

Consider benzodiazepine for muscle spasm or additional pain control

### NOTE:

Do not allow the obvious fracture to obscure other assessment findings.  
Contact medical control when diminished or absent  
neurovascular function is noted distal to the injury.

## HEAD/NECK/SPINE INJURIES

### EMT-F (First Responder):

#### INITIAL ASSESSMENT

**Manually stabilize head, neck and spine** until secured on appropriate device

**DO NOT HYPEREXTEND THE NECK**

Administer high flow oxygen, with a non-rebreather mask.

Use pocket mask to hyperventilate the head injured patient with decreased LOC

Be alert for and treat shock; see Shock Protocol, page 53

Perform a mini neurological check (AVPU)

#### FOCUSED / DETAILED ASSESSMENT

Identify mechanism of injury

Note cerebrospinal fluid or blood from ears, nose, and/or mouth

Perform a neurological assessment on all four extremities (CMS)

### EMT-F (with immobilization endorsement):

Realignment of the head neck and spine may be necessary to facilitate immobilization or correct an airway problem

Return patient to an in-line neutral position if no resistance is met

Careful assessment prior to and after realignment is critical

Maintain and transport with entire immobilization device turned onto its side when possible  
airway issues are present

Use padding (Back Raft) if possible, to protect patient from further injury

### EMT-B (EMT-Basic):

Use bag valve mask to assist ventilation, as needed, 100% oxygen

### EMT-B (with airway or ET endorsement):

Establish advanced airway as needed, maintaining in-line stabilization at all times

### EMT-B (with IV endorsement):

Start a peripheral IV(s), as necessary, TKO, with NORMAL SALINE/LACTATED RINGERS solution (en route)

#### NOTE:

**IF** patient is unconscious, see Altered Mental Status Protocol, page 10

**IF** decreased blood pressure, consider other injuries.

A cervical collar alone **WILL NOT** provide secure cervical spine immobilization.

**DO NOT** manipulate the cervical spine to apply a cervical collar

Do not use **TRACTION** on the cervical spine.

**IF** a patient has a **helmet in place** and it is poor fitting or interferes with the airway, remove it in accordance to the American College of Surgeons guidelines.

## HEAT EMERGENCIES

### **EMT-F** (First Responder):

#### INITIAL ASSESSMENT

- Be alert for and treat shock; see Shock Protocol, page 53
- Be alert for altered mental status; see Altered Mental Status Protocol, page 10
- Administer high flow oxygen with a non-rebreather mask

#### FOCUSED / DETAILED ASSESSMENT

- Skin condition and color
- History, time of onset, existing medical conditions and current medications

#### ADDITIONAL FIELD TREATMENT AND PREPARATION FOR TRANSPORT

- Remove from heat source
- IF patient is alert and oriented: encourage oral fluid intake, if tolerated (NO heated fluids or alcohol)

### **EMT-F** (with ambulance endorsement):

- IF skin is hot and patient is unconscious: transport immediately
- Do not delay transport for cooling in heat stroke patients
- IF so advised by medical control, cool patient en route by sponge bathing with tepid water <100 F

### **EMT-B** (With IV endorsement):

- Start a peripheral IV(s), as necessary, with NORMAL SALINE solution (en route)

### **EMT-I** (EMT-Intermediate):

- Attach monitor
- Identify rhythm and treat specific dysrhythmias within scope of practice, according to the most recent ACLS protocols and as directed by the medical director

#### NOTE:

Not all heat emergencies are environmental in nature. They may have infectious, neurological or pharmacological etiology. High body temperature may cause seizures, particularly in preschool age children or patients with a known seizure disorder; see Seizure Protocol, pages 47

# JOINT DISLOCATIONS

## EMT-F (First Responder):

### INITIAL ASSESSMENT

Be alert for and treat shock; see Shock Protocol, page 53

### FOCUSED / DETAILED ASSESSMENT

Identify mechanism of injury

Dislocations are splinted in position found

Check and document pulse and sensation distal to the injury before and after splinting

### ADDITIONAL FIELD TREATMENT AND PREPARATION FOR TRANSPORT

Protect injury from excessive movement

Elevate injured limb if possible (not hips)

Apply cold packs to injury site when practical

## EMT-B (with IV endorsement):

Start IV with NORMAL SALINE /LACTATED RINGERS solution (en route)

## EMT-I (EMT-Intermediate):

Administer analgesic for pain:

**Adult** -MORPHINE 2-5 mg IV or IM, Repeat every 5 minutes as needed up to a maximum of 15 mg (as long as vital signs are stable)

**Pediatric** -MORPHINE 0.1 mg/kg to a max of 5mg (IV or IM)

Hold analgesic options if blood pressure is less than 100 systolic or if respiratory depression is present

If patient is stable, administer analgesics before moving the extremity

## EMT-P (EMT-Paramedic):

May administer alternative analgesics of choice if BP systolic >100

Consider benzodiazepine for muscle spasm or additional pain control

### NOTE:

Contact medical control when diminished or absent neurovascular function is noted distal to injury.

## MULTIPLE TRAUMA

### **EMT-F** (First Responder):

#### INITIAL ASSESSMENT

- Secure airway while MANUALLY immobilizing C-spine; see Head / Neck / Spine Protocol page 34
- Administer high flow oxygen per non-rebreather mask
- Control external bleeding; see Bleeding Protocol, page 17
- Be alert for and treat shock; see Shock Protocol, page 53
- Conduct mini neurological survey

#### FOCUSED / DETAILED ASSESSMENT

- Identify mechanism of injury and treat injuries in order of priority, according to protocol

#### ADDITIONAL FIELD TREATMENT AND PREPARATION FOR TRANSPORT

- Take and record vital signs every 5 minutes

### **EMT-F** (with immobilization endorsement):

- Fully immobilize patient
- Realignment of the head neck and spine may be necessary to facilitate immobilization or correct an airway problem
- Return patient to an in-line neutral position if no resistance is met
- Careful assessment prior to and after realignment is critical

### **EMT-F** (with ambulance endorsement):

- Secondary survey and treatment should be completed en route to the hospital
- Maintain and transport with entire immobilization device turned onto its side when situation warrants.
- Transport obvious pregnant patients on her left side OR elevate right hip OR physically shift uterus to the left side

### **EMT-B** (EMT-Basic):

- Determine bilateral breath sounds

### **EMT-B** (with airway or ET endorsement):

- Establish advanced airway as needed

### **EMT-B** (with IV endorsement):

- Start (2) IV(s) with NORMAL SALINE /LACTATED RINGERS solution (en route)
- TKO unless patient in shock (refer to Shock Protocol, see page 53)

### **EMT-I** (EMT-Intermediate):

- Attach monitor

### **EMT-P** (EMT-Paramedic):

- May administer analgesic of choice in judicious amounts if BP > 100 systolic

**NOTE:**

If your patient might be pregnant, remember survival of the fetus depends on the survival of the mother.

**EARLY TRANSPORT IS INDICATED FOR MULTI-SYSTEM TRAUMA PATIENTS,**

Communicate with transport agency as soon as possible.

Adhere to your local trauma systems policy for transport direction

A cervical collar alone **WILL NOT** provide secure cervical spine immobilization.

**DO NOT** manipulate the cervical spine to apply a cervical collar

Do not use **TRACTION** on the cervical spine.

**IF** a patient has a **helmet in place** and it is poor fitting or interferes with the airway, remove it in accordance to the American College of Surgeons guidelines.

## NEONATAL (< 2 months) RESUSCITATION

### EMT-F (First Responder):

#### INITIAL ASSESSMENT

Establish and protect airway

Suction secretions (mouth, oropharynx then nose) dry infant to provide stimulation and prevent chilling, keep infant warm, keep head covered

**Check RESPIRATORY** rate:

**IF** rate is > 20 or crying, NO ACTION

**IF** rate is <20, tactile stimulation, provide assisted ventilation with pocket mask as needed

**Check HEART** rate:

**IF** rate > 100, NO ACTION

**IF** rate 60 - 100, ventilate with high flow oxygen

**IF** rate < 60, VENTILATE with high flow oxygen and begin chest compressions

**Check COLOR:**

Normal, NO ACTION

Central cyanosis, provide 100% oxygen and assist ventilation as needed

#### FOCUS / DETAILED ASSESSMENT

#### ADDITIONAL FIELD TREATMENT AND PREPARATION FOR TRANSPORT

Protect from injury during movement

### EMT-B (with airway or ET endorsement):

Use bag valve mask to assist ventilation, as needed, 100% oxygen

Establish advanced airway as needed

### EMT-B (with monitoring endorsement):

Determine glucose

### EMT-I (EMT-Intermediate):

Attach monitor

**If** glucose < 60, administer 2cc/kg, D10W (IV)

**If** respiratory rate is not maintained with stimulation, administer NARCAN 0.1 mg/kg (IM, IV, ET or IO)

**If** heart rate remains less than 60 after 30-60 seconds of adequate chest compressions and ventilation with high flow oxygen, administer EPINEPHRINE 0.01-0.03 mg/kg of 1:10000 (IV, IO, ET)

#### NOTE:

“ACROCYANOSIS” (blue extremities, pink trunk) is NORMAL for newborns.

Newborn bradycardia is due to decreased oxygenation

Meconium is fetal stool, which if aspirated can cause neonatal respiratory problems.

**If** meconium is noticed prior to delivery, attempt to suction the mouth and nose after delivery of the head but before the delivery of the body

Communicate the situation to the mother and ask her not to push until suction completed.

# OBSTETRICAL EMERGENCIES

## EMT-First Responder:

### INITIAL ASSESSMENT

#### **IF delivery is imminent:**

Visually examine patient's perineum

**If** the perineum is bulging or baby's head is crowning, **prepare to deliver baby**

**If** the patient has had one or more normal deliveries and complains of urge to "push", "bear down," or "have a bowel movement," **prepare to deliver baby**

**If** complications are apparent, i.e., foot or cord visible or if severe vaginal bleeding; see Abnormal Delivery Protocol, page 9 and contact transporting agency immediately

### FOCUS / DETAILED ASSESSMENT

Reassure mother

Obtain pertinent medical and obstetrical history

Membranes ruptured? Color of fluid?

Date of expected birth? Other births?

History? Onset, frequency and duration of contractions?

### ADDITIONAL FIELD TREATMENT AND PREPARATION FOR TRANSPORT

#### **EMT-F** (with ambulance endorsement):

When the delivery is not proceeding normally and in which the mother displays sudden onset of severe abdominal pain or shock, place on high-flow oxygen, treat for shock; see Shock Protocol, page 53 and **transport immediately**, notify receiving facility en route

If no visible signs of impending delivery, transport patient on her left side OR elevate right hip OR gently shift uterus to the left side, transport **patient at a normal** rate of speed

#### **EMT-B** (with IV endorsement):

Start IV, with NORMAL SALINE/LACTATED RINGERS solution (en route, unless delivery is imminent)

#### **EMT- I** (EMT-Intermediate):

**IF** seizures, refer to Seizure Protocol on page 47

#### **EMT-P** EMT-Paramedic):

**IF** heavy bleeding following delivery of the placenta:

Mix 20 units PITOCIN in 1000 ml NORMAL SALINE or LACTATED RINGERS and run wide open for the first liter, unless directed otherwise by medical direction

**IF** seizures:

Mix 4 grams of MAGNESIUM SULFATE in 500 ml of NORMAL SALINE and run in over 30 minutes



**NOTE:**

Consider the possibility of pregnancy in any female of childbearing age with complaints of vaginal bleeding, menstrual cycle irregularity, abdominal pain (cramping), low back pain not associated with trauma, or shoulder pain not associated with trauma.

If cord is around baby's neck during delivery, slip cord over baby's head before shoulders deliver to avoid strangulation of baby; if cord won't slip, clamp cord in two places and cut cord between the two clamps. See Abnormal Delivery Protocol, page 9 and contact transporting agency immediately.

The greatest risks to the newborn infant are airway obstruction and hypothermia. **KEEP BABY COVERED, WARM, DRY AND KEEP AIRWAY SUCTIONED** with bulb syringe.

Greatest risk to the mother is postpartum hemorrhage; watch closely for signs of hypovolemic shock and excessive vaginal bleeding. If the placenta is delivered, externally massage the uterus till firm.

When using bulb syringe to remember to squeeze the bulb **PRIOR** to insertion in baby's nose or mouth, to suction

Spontaneous or induced abortions may result in copious vaginal bleeding; Reassure the mother, provide emotional support, treat for shock; see Shock Protocol, page 53; **Notify transport agency immediately.** Notify receiving facility. Transport fetus, placenta and any tissue to the hospital with the patient

## PEDIATRIC RESPIRATORY DISTRESS

### EMT-F (First Responder):

#### INITIAL ASSESSMENT

##### **IF ADEQUATE** ventilation:

Let child assume position of comfort. DO NOT LAY CHILD DOWN

Administer high flow oxygen with a non-rebreather mask or "BLOW BY"

##### **IF INADEQUATE** ventilation:

Consider foreign body obstruction

If child has croupy cough or epiglottitis is suspected:

Put child in position of comfort

DO NOT attempt any procedure or maneuver which may increase child's anxiety unless absolutely necessary to preserve airway (this includes examination of the oropharynx)

Administer high flow oxygen. Use pocket mask to ventilate as necessary.

Epiglottitis may require forceful ventilation

Constantly monitor airway for patency in any unconscious child

#### FOCUSED / DETAILED ASSESSMENT

Obtain pertinent medical history if time allows

### EMT-B (EMT-Basic):

Use bag valve mask to assist ventilation, as needed, 100% oxygen

### EMT-B (with airway or ET endorsement):

If unconscious and age >8, establish advanced airway as needed

Advanced airway management as needed

### EMT-B (with medication endorsement):

With respiratory distress, and wheezing or very decreased breath sounds bilaterally administer:

2 puffs Albuterol via metered dose inhaler with a spacer or Albuterol premix (2.5 mg mixed in 3cc of Normal Saline) via nebulizer with oxygen

### EMT-I (EMT-Intermediate):

If Patient has expiratory Stridor:

Administer Epinephrine 0.5 mg in 2cc Normal Saline nebulized with oxygen

Attach monitor

### EMT-P (EMT-Paramedic):

Consider advanced airway if impending respiratory arrest

With complete obstruction of the airway and inability to intubate, consider cricothyrotomy.

**(NO SURGICAL CRICOTHYROTOMY** if patient is under 12 years of age, consider needle cricothrotomy and or jet insufflation)

**IF** patient experiences respiratory distress and marked wheezing or very decreased breath sounds:

**Pediatric** - administer ALBUTEROL .25cc to .50cc of a 5% solution mixed in 30C of normal saline NEBULIZED with oxygen

**NOTE:**

When dealing with pediatric patients consider allowing a parent to accompany. The conscious, dyspneic child may rapidly deteriorate to respiratory crisis.

**PREPARE TO INTERVENE.** Be prepared to ventilate.

Allergic reactions are frequently responsible for dyspneic episodes, thus inquiry for known allergies must include substances other than medications.

**DYSPNEA is a symptom**, not a disease/injury, reassess for cause and correct as necessary/possible.

# POISONING

## EMT-F (First Responder):

### ***PROTECT YOURSELF FROM POSSIBLE EXPOSURE!***

**\*\*\* refer to MARK I usage protocol if conditions exist \*\*\***

#### INITIAL ASSESSMENT

Be alert for and treat respiratory compromise; see Dyspnea Protocol, page 31

Be alert for and treat shock; see Shock Protocol, page 53

Be alert for seizures, see Seizure Protocol, page 47

IF unconscious; see Altered Mental Status Protocol, page 10

#### FOCUSED / DETAILED ASSESSMENT

Identify substance, and if reasonable, have it taken to the hospital with the patient

Estimate quantity

Time since exposure

Obtain pertinent medical history; chronic illness, medical problems within past 24 hours, medications and allergies

#### ADDITIONAL FIELD TREATMENT AND PREPARATION FOR TRANSPORT

##### **Inhaled poisons: *BE AWARE OF ENCLOSED OR CONFINED AREAS***

Immediately get the person to fresh air, Avoid breathing fumes

Open doors and windows wide. If victim is not breathing, start artificial respiration

Administer oxygen, 100% non-rebreather, Assist ventilation as necessary

##### **Dermal exposure:**

Remove contaminated clothing and flood skin with water for 10 minutes

Then wash gently with soap and water and rinse

Poison in the eye; flood the eye with lukewarm (not hot) water poured from a large glass 2 or 3 inches from the eye, Repeat for 15 minutes, Have the patient blink as much as possible while flooding the eye, Do not force the eyelid open

##### **Swallowed poisons:**

DO NOT give anything by mouth until you have called for advice

## EMT-F (with monitoring endorsement):

Determine glucose and report to arriving transporting service

## EMT-B (with airway or ET endorsement):

Establish advanced airway as needed

## EMT-B (with IV endorsement):

Start IV with NORMAL SALINE/LACTATED RINGERS solution (en route)

## EMT-I (EMT-Intermediate):

Attach monitor

### **IF suspected **Organophosphate/carbonates (pesticides/insecticides) poisoning****

**Adult - ATROPINE 2 mg (IV, IO, IM, ET)**

Dose may be repeated one time in 5 minutes, call medical control

**Pediatric** - ATROPINE 0.02 mg/kg (IV, IO, IM, ET) with a minimum of 0.15mg.  
Dose may be repeated one time in 5 minutes, call medical control

**EMT-P** (EMT-Paramedic):

**IF Cyanide poisoning and/or hydrogen sulfide (sewer gas)**

Utilize CYANIDE antidote kit as available on site or administer AMYL NITRATE vials (30 seconds of each minute and replace vial every 3 minutes)

**IF TCA overdose** with ALOC, tachycardia, widened QRS (greater than 0.12 or 3 boxes on the rhythm strip) or any dysrhythmia: Bicarb 50 MEQ (IV)

**NOTE:**

Treat patient not the poison!

DO NOT administer product label antidotes in the field; product label antidotes are frequently wrong

**If** patient is unconscious or semi-conscious, transport on left side, protect the airway and DO NOT administer oral agents

**If** ingestion is by a small child, consider other children present as potential poisonings  
Contact the receiving facility as soon as possible.

## PSYCHIATRIC EMERGENCIES

### EMT-F (First Responder):

#### INITIAL ASSESSMENT

Protect yourself and others

#### FOCUSED / DETAILED ASSESSMENT.

Obtain history including:

Prescription or non-prescription drugs

Underlying organic cause, i.e., brain tumor, chemotherapy, hypoglycemia, hyperglycemia

Previous psychiatric problem

#### ADDITIONAL FIELD TREATMENT AND PREPARATION FOR TRANSPORT

### EMT-F (with ambulance endorsement):

With patient consent:

Transport patient in position of comfort if not contraindicated by injuries

Keep environment as quiet as possible

Do not use sirens unless indicated by injuries

**IF** patient refuses transport, contact Law Enforcement Agency according to local requirements

Use and document physical restraint only as necessary for the protection of yourself or the patient

### EMT-P (EMT-Paramedic):

Chemical restraint when necessary: HALDOL 5mg IV or IM, may repeat once

Extrapyramidal reactions (abnormal muscle movement, tremor, rigidity) may occur with HALDOL, if this occurs, administer BENADRYL 50mg IV or IM

#### **NOTE:**

RESCUER must assume control of the situation.

Multiple people attempting to intervene may increase patient's confusion and agitation.

Speak in a calm, quiet voice. Move slowly when approaching and caring for patient.

Do not attempt to restrain until law enforcement is on scene.

If restraints have been applied, do not remove. Protect airway.

Consider medical etiology (ie: hypoxia, hypoglycemia, etc.)

## RESUSCITATION TRIAGE

1. Do not initiate resuscitation in the patient who has obvious signs of death:
  - a. Injuries incompatible with life, i.e. decapitation, incineration, or
  - b. Dependent lividity, or
  - c. Rigidity or rigor, or
  - d. Decomposition.
2. Do not initiate resuscitation or discontinue resuscitation when the following has been determined:
  - a. Obvious high energy blunt trauma injuries with no signs of life (breathing, coughing, moving, consciousness), no pulse, and asystole if cardiac monitor available, or
  - b. Cardiac arrest in a normothermic patient (EMT obtained core temperature > 35 degrees C) unresponsive to the first 15 minutes of standard treatment, or
  - c. Any pulseless, breathless patient in a multiple casualty situation where all resources are required for the surviving patients.
3. For patients with POLST or Comfort One appropriate documentation follow POLST or Comfort One protocols/instructions.

## SEIZURES - DURING SEIZURE

### EMT-F (First Responder):

#### INITIAL ASSESSMENT

- Administer high flow oxygen with non-rebreather mask
- If possible place patient on his/her side facing you to facilitate airway management

#### FOCUSED / DETAILED ASSESSMENT

- Protect patient from injury
- Remove hazards from immediate area
- Avoid unnecessary physical restraint
- Obtain pertinent medical history from family and bystanders including;
  - Known seizure disorder
  - Medications, what medication/when last taken
  - Check for medical tag
  - Alcohol or drug intake
  - Recent trauma; see Head/Neck/Spine Protocol, page 34
  - Note fever, particularly in children under 5 years of age; see Heat Protocol, page 35
  - Duration of seizure

#### ADDITIONAL FIELD TREATMENT AND PREPARATION FOR TRANSPORT

- Protect patient from injury during seizure

### EMT-F (with monitoring endorsement):

- Determine glucose and report to arriving transporting service

### EMT-F (with ambulance endorsement):

- Do not transport** during active seizures UNLESS seizure lasts in excess of 5 minutes or patient is significantly injured. Attempt to contact medical facility prior to transport
- IF** transport during seizure becomes necessary, pad stretcher side rails to protect patient

### EMT-B (with IV endorsement):

- Start IV with NORMAL SALINE/LACTATED RINGERS solution (en route)

### EMT-B (with airway or ET endorsement):

- Establish advanced airway as needed

### EMT-I (EMT-Intermediate):

- Attach monitor

- Administer:

**Adult** - DIAZEPAM 2-10 mg (IV, IM, IO, ET) or \* **MIDAZOLAM** 1-5 mg (IV, IM, IN)  
IF glucose is < 60 or unable to determine glucose then administer THIAMINE  
100 mg (IV, IM) then DEXTROSE 50% (50cc) (IV)

**Pediatric** - **MIDAZOLAM** 0.2 mg/kg (IV, IM, IN) or DIAZEPAM 0.3 mg/kg up to a max of 10 mg (IV, IM, ET, IO, Rectal)



IF glucose is < 60 or unable to determine glucose then: DEXTROSE 25%, 2cc/kg (IV, IO) over 2 minutes

**If seizures are secondary to trauma or hypoxia, without hypoglycemia, do not give DEXTROSE.**

**NOTES:**

Do not attempt to insert tongue blade or other instruments in the mouth of a patient who is having a seizure  
Protect the dignity of the patient during a seizure;  
do not allow a crowd of onlookers to gather.

## SEIZURES - POST SEIZURE (postictal)

### EMT-F (First Responder):

#### INITIAL ASSESSMENT

- Assure patent airway
- Administer high flow oxygen with a non-rebreather mask
- Place patient on his/her side facing you to facilitate airway management

#### FOCUSED / DETAILED ASSESSMENT

- Obtain a history including:
  - Known seizure disorder
  - Medications, what medication/when last taken
  - Check for medical tag
  - Alcohol or drug intake
  - Recent trauma; see Head/Neck/Spine Protocol, page 34
  - Note fever, particularly in children under 5 years of age; see Heat Protocol, page 35
  - Duration of seizure
  - Treat injuries sustained during the seizure, see specific protocol

#### ADDITIONAL FIELD TREATMENT AND PREPARATION FOR TRANSPORT

- Determine level of awareness and orientation
- Neurological evaluation including; speech pattern, eye movement, motor function
- Expect additional seizures

### EMT-F (with monitoring endorsement):

- Determine glucose and report to arriving transporting service

### EMT-B (with IV endorsement):

- Start a peripheral IV, with NORMAL SALINE/LACTATED RINGERS solution (en route)

#### NOTE:

Patients in postictal state may appear lethargic, drift into sleep or have short memory loss or become violent.  
They should be allowed to rest and should be reassured.  
It may be helpful to reorient patients by telling them where they are, what happened, who you are etc.  
Protect the dignity of the patient during a seizure; do not allow a crowd of onlookers to gather.  
Patient may decline transport if they have a known history of seizures; experienced a single seizure and they are awake at the scene.

# STROKE

## **EMT-F** (First Responder):

### INITIAL ASSESSMENT

- Establish and protect airway
- Suction secretions as needed
- Administer high flow oxygen by non-rebreather mask
- Use pocket mask to assist ventilations as needed
- See Altered Mental Status Protocol, page 10

### FOCUSED / DETAILED ASSESSMENT

- Obtain careful history including:
  - Onset of symptoms
  - Previous history of CVA
  - Seizure disorders
  - Diabetes, thyroid disease, hypertension
  - Any trauma
  - Any toxins like alcohol, carbon monoxide
- Obtain and record vital signs
- Complete and provide the facility a **“Prehospital Stroke Screening Scale”**

### ADDITIONAL FIELD TREATMENT AND PREPARATION FOR TRANSPORT

## **EMT-F** (with monitoring endorsement):

- Determine glucose, relay to transporting agency en route

## **EMT-F** (with ambulance endorsement)

- Transport patient in coma position (as injuries allow), with the head slightly elevated 30°

## **EMT-B** (with airway or ET endorsement):

- Establish advanced airway as needed

## **EMT-B** (with monitoring endorsement):

- Determine glucose
- If < 60 administer an oral substance high in simple sugar (if tolerated by patient)
- Do not delay transport for the administration of oral glucose agents

## **EMT-B** (with IV/IO endorsement):

- Start a peripheral IV(s) as necessary, TKO with a NORMAL SALINE solution (en route)
- Avoid affected limbs when establishing IV(s) if possible

## **EMT-B** (with medication endorsement):

- If glucose < 60, administer GLUCAGON, 1 mg (IM or IN)

## **EMT- I** (EMT-Intermediate):

- Attach monitor:
  - Identify rhythm and treat specific dysrhythmia; within scope of practice, according to the most recent ACLS protocols and as directed by the medical director
- If glucose is < 60:

Administer THIAMINE 100 mg IV then DEXTROSE 50% (50cc)  
IF unable to initiate a peripheral IV and if glucose < 60, administer GLUCAGON 1mg IM

**NOTES:**

The following are the signs and symptoms suggestive of stroke, which should alert pre-hospital personnel for rapid evaluation and transport:

- Abrupt onset of hemi paresis or monoparesis (one-sided weakness)

- Sudden decline in level of consciousness

- Cataclysmic headache

- Acute dysphagia or dysarthria

- Sudden loss of vision in one or both eyes or loss of vision in half of the visual field

- Double vision

- Ataxia

- Weakness in all four extremities

- Loss of sensation in half of the body

## SEXUAL ASSAULT

### EMT-F (First Responder):

#### INITIAL ASSESSMENT

Assess and treat for shock; see Shock Protocol, page 53

#### FOCUSED /DETAILED ASSESSMENT

History

Identify mechanism of injury

Treat other injuries as indicated, see specific protocol

#### ADDITIONAL FIELD TREATMENT AND PREPARATION FOR TRANSPORT

Contact local medical control to arrange for a social worker, minister or rape task force person to meet the patient at the hospital if possible

#### **NOTE:**

Protect the scene and preserve evidence in cooperation with law enforcement.

Encourage the patient not to bathe, douche, brush teeth, or change clothes.

This is a highly emotionally and volatile situation; be sure your findings and treatment are clearly documented.

Crew members of the same sex may relate better with the patient in the time of emotional crisis.

Remember sexual assault is required to be reported to the proper authorities.

Remember, the patient of a sexual assault is not always female.

Place any clothing removed in a paper bag (do not use plastic)

# SHOCK

## **EMT-F** (First Responder):

### INITIAL ASSESSMENT

- Administer high flow oxygen by non-rebreather mask
- Control external bleeding; see Bleeding Protocol, page 17
- Maintain body heat.

### FOCUSED / DETAILED ASSESSMENT

- Take and record vital signs every five minutes
- Identify mechanism of injury or illness

### ADDITIONAL FIELD TREATMENT AND PREPARATION FOR TRANSPORT

- Elevate legs if patient's condition allows
- Contact transporting agency as soon as possible

## **EMT-B** (EMT-Basic):

- Assess bilateral breath sounds

## **EMT-B** (with airway or ET endorsement):

- Utilize a dual lumen tube or laryngeal mask airway as needed

## **EMT-B** (with IV endorsement):

- Start (2) large bore IV(s) with NORMAL SALINE /LACTATED RINGERS solution (en route).

  - Adult** - administer a fluid challenge of 500cc. Reassess and titrate to systolic blood pressure of greater than 80 mm Hg, Contact medical control

  - Pediatric** - initial fluid bolus of 20cc/kg, repeat one time, Contact medical control

## **EMT-B** (with airway or ET endorsement):

- Establish advanced airway as needed

## **EMT-I** (EMT-Intermediate):

- Attach monitor

## **EMT-P** (EMT-Paramedic):

- IF** cardiogenic shock, NOT hemorrhagic or hypovolemic, then:

- Administer a DOPAMINE infusion, titrate to maintain systolic BP > 100.

- Do Not exceed 25 micrograms/kg per minute

**NOTE:**

Attempt to determine the etiology of shock

Shock is indicated by a deteriorating trend of the following signs and symptoms:

- Restlessness and anxiety decrease in level of consciousness

- Capillary refill greater than 2 seconds

- Cool, clammy, pale skin

- Nausea and vomiting

- Cyanosis (periorbital, perioral, nail bed)

- Rapid shallow respiration greater than 24, progressing to slow, labored respirations

- Narrowing pulse pressure

Decrease in blood pressure is a LATE sign, tachycardia is an early indicator

The elderly, children, pregnant women, patients on drugs and athletes MAY NOT show early signs of shock, and may deteriorate quickly

# SPECIAL PROTOCOL (MARK I - INJECTOR)

## PRE HOSPITAL PROVIDER GOALS:

- To protect themselves and other pre hospital responders from any significant toxic exposure.
- To obtain accurate information on the health effects of the nerve agent and the appropriate pre hospital evaluation and medical care for victims.
- To minimize continued exposure of the victim and secondary contamination of health care personnel by ensuring that proper decontamination has been completed prior to transport to a hospital emergency department.
- To provide appropriate pre hospital emergency care consistent with their certification; and
- To prevent unnecessary contamination of their transport vehicle or equipment.

## GENERAL

This protocol is to be used in the event of a nerve agent release from the Deseret Chemical Depot. The nerve agents of known military importance are GA (Tabun), GB (Sarin), GD (Soman), GF, and VX.

## ASSESSMENT (of the hazards):

**Physical Characteristics** – Nerve agents under temperate conditions are liquids, not gases as they erroneously called (“nerve gas”). They are clear and colorless, they have no taste, and most are odorless, although GD and GA are said to have slight odors. GB is the most volatile, but it evaporates less quickly than does water. The volatility of the other “G agents” is GD>GA>GF. VX is similar to light motor oil, and although liquid VX produces a slight amount of vapor it generally is not considered to be a vapor hazard unless the ambient temperature is very warm.

### Signs and Symptoms:

After a small vapor exposure: Miosis constricted pupils), runny nose, shortness of breath.

After a large vapor exposure: Loss of consciousness, convulsions, apnea, flaccid paralysis.

After a small to moderate liquid exposure: Localized seating, fasciculations; nausea, vomiting, diarrhea, feeling of weakness (may start hours later).

After a large liquid exposure: Loss of consciousness, convulsions, apnea, flaccid paralysis.

### Patient Treatment (In general, this is the responsibility of the EMT or Paramedic

Assign highest priorities to ABC and decontamination.

Complete primary and secondary surveys as conditions allow. Bear in mind the chemical specific information.

In multiple patient situations, begin proper triage procedures.

Treat presenting signs and symptoms as appropriate and when conditions allow.

Administer orders of the designated hospital when conditions allow.

Perform invasive procedures only in contaminated areas.

Reassess the patient frequently because many chemicals have latent physiological effects.



D. Recommendations for Initial Therapy

Type of Exposure	Symptoms	Treatment	Comments
<b>Mild Vapor Exposure</b>	Miosis alone	No treatment	The presence of miosis and rhinorrhea require observation only
	Rhinorrhea	Depends on amount of rhinorrhea and amount of discomfort	The presence of miosis and rhinorrhea require observation only
<b>Moderate Vapor Exposure</b>	Miosis, rhinorrhea, shortness of breath, wheezing, secretions, muscle weakness, GI effects (vomiting and diarrhea)	HazMat EMT's – One or two MARK I kits (repeat doses every 5 – 10 minutes via MARK I kit; total of 1,800 mg 2-PAMCI)	Be more aggressive with moderate vapor exposures.
<b>Severe Vapor Exposure</b>	Unconscious, seizing, flaccid, apnea	<ul style="list-style-type: none"> <li>Haz Mat EMT's</li> <li>-Three MARK I kits ASAP</li> <li>-Airway / Ventilation / O2</li> </ul>	The antidotes should be administered as early as possible because airway management will not be possible until atropine reduces the bronchoconstriction. After administering the antidote, immediately obtain a definitive airway. Oxygenate the patient and suction secretions.
<b>Mild Liquid Exposure</b>	Localized sweating fasciculations	<ul style="list-style-type: none"> <li>Haz Mat EMT's – One MARK I kit</li> </ul>	
<b>Moderate Liquid Exposure</b>	Gastronintestinal effects (vomiting, diarrhea)	<ul style="list-style-type: none"> <li>Hax Mat EMT's – One MARK I kit (repeat atropine in 5 – 10 minutes if effects worsen)</li> </ul>	Oxygen may be needed in those with cardiac or pulmonary disease who have severe breathing difficulty, but generally is not necessary.
<b>Severe Liquid Exposure</b>	Unconscious, seizing, flaccid, apnea	Haz Mat EMT's - Three MARK I kits    ASAP - Airway/Ventilation/ O2	The antidotes should be administered as early as possible because airway management will not be possible until atropine reduces the bronchoconstriction. After administering the antidote, immediately obtain a definitive airway. Oxygenate the patient and suction secretions.